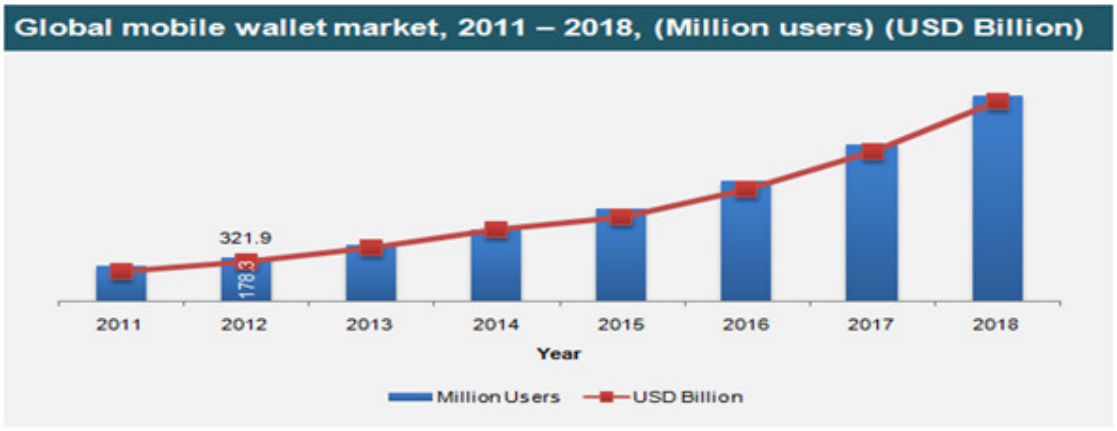
Introduction

In today's world, technology is playing vital role in daily lives of the people benefiting them by its virtues. Technology has transformed consumer's life. Mobile technology in particular is an asset towards mankind in this transformation. Through this, the financial sector has got the momentum in keeping their customers through Mobile Banking. It is an innovative technology that has gained popularity in all the parts of the world. Mobile banking services consist of things such as balance enquiry, fund transfer among other services, transfer of money, information search, net banking, etc. The adoption of mobile banking or net banking has brought about changes in banking operations following the advancement of mobile communication techniques and the collaboration with mobile service providers as a result, the mobile banking technology has become more conductive to individuals and banking sector.

Mobile payment services facilitate the consumers to make point of sales (POS) through mobile devices i.e. mobile phones and personal digital assistants (PDAs). As per a recent market study published by Transparency Market Research (TMR), the global mobile wallet market will exhibit a whopping CAGR of 30.7% between 2012 and 2018. The market is witnessing great success due to the enhanced customer experience, a fulsome experience in terms of speed, security, and well-conceived user engagement, as reported in the study. In spite of the potential of mobile payment services to transform shopping and remittance experience, inadequate awareness regarding the function of mobile wallets, privacy, and security issues faced by users will challenge the market(source: TMR study).

Figure: 1

Global Mobile Wallet Market-2011-2018



Source: Transparency Market Research

Smartphone are not only used as communication devices, but also to be used as socialized tool, entertainment tool, internet access tool, and even payment tool (Rajgopal, 2012).

Besides payment, people can also store receipts, coupons, business cards, bills, passes in their smart phones. When smartphone serves as leather wallets, it is called "Digital Wallet" or widely known as "Mobile Wallet".

Definition of Mobile Wallets

The **Mobile Wallet**, which is also called mWallet or eWallet, refers to a mobile technology that is used similarly to a real wallet or we can say cash wallet. The mWallet is a type of pre-paid account in which a user can store his/her money for any future online transaction. It provides a convenient solution for any business looking to allow customers to purchase their products online with greater ease, therefore driving sales.

A mobile wallet is a much-advanced fluent application that includes elements of mobile transactions, membership cards, loyalty cards and travel cards. It also stores personal and sensitive information like passports, credit card information, PIN codes, online shopping accounts, booking details and insurance policies that can be encrypted or password-protected (Caldwell, 2012).

Types of Mobile wallets permitted in India

As per the Reserve Bank of India, there are three kinds of mobile wallets in India:

Closed Mobile wallets: These are wallets issued by an entity for facilitating the purchase of goods and services from it. These instruments do not permit cash withdrawal or redemption. As these instruments do not facilitate payments and settlement for third party services, issue and operation of such wallets are not classified as payment systems. Hence, RBI approval is not required for issuing them.

Eg. Cab services, e-commerce and mobile companies create e-wallets for making payments towards purchase of products from them /for usage of their services. They provide cash backs for payments made through this channel. This is one way of ensuring loyalty of their customers.

Semi-Closed Mobile wallets: These are wallets which can be used for purchase of goods and services, including financial services at a group of clearly identified merchant locations/ establishments which have a specific contract with the issuer to accept them. These wallets do not permit cash withdrawal or redemption by the holder.

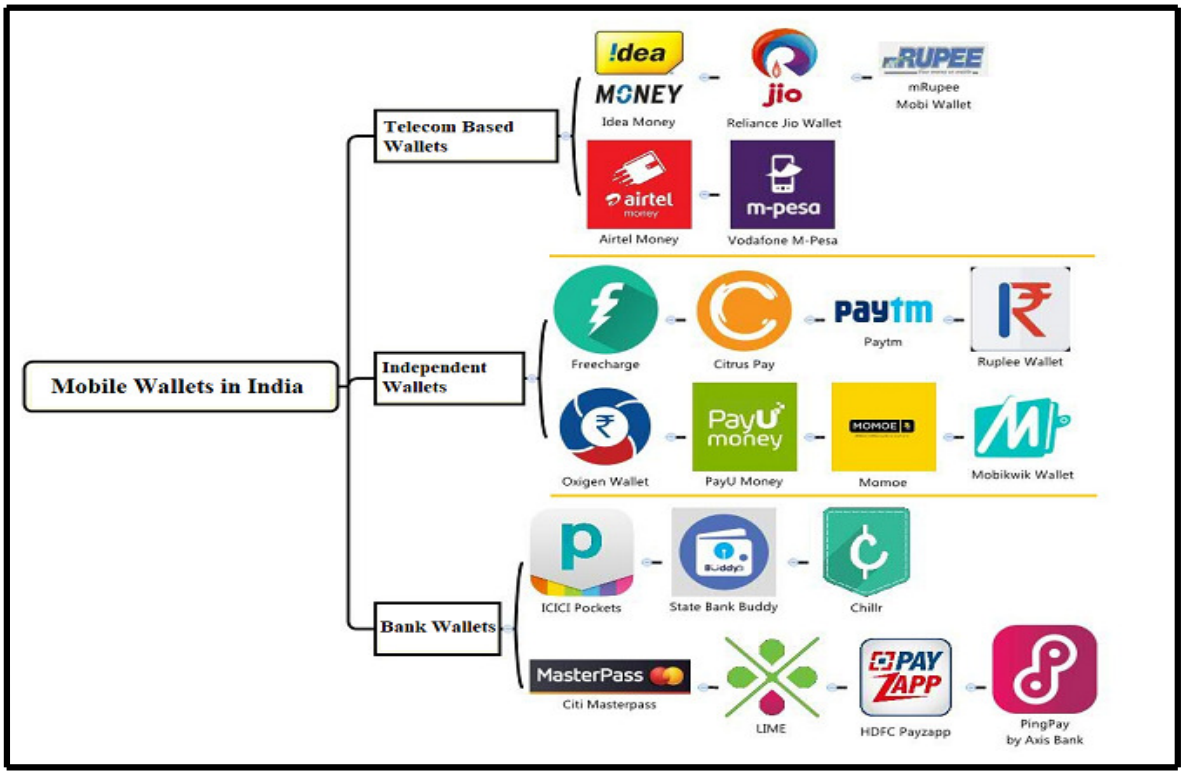
Wallets for amounts upto Rs.10,000/- can be created under this category by accepting minimum details of the customer, provided the amount outstanding at any point of time does not exceed Rs. 10,000/- and the total value of reloads during any given month also does not

exceed Rs. 10,000/-. Amount upto Rs.50,000/- can be created in wallets by accepting any 'officially valid document' which is compliant with anti-money laundering rules. Such wallets are non-reloadable in nature.
Amount upto Rs.1,00,000/- can be created by with full Know Your Client norms (KYC) and can be reloaded.
E.g. Airtel Money, which is used for making payments for a range of services like money transfer from Airtel Money to another bank account or any other Airtel Money Wallet or paying select utility bills.

Open Mobile wallets: These are wallets which can be used for purchase of goods and services, including financial services like funds transfer at any card accepting merchant locations [point of sale (POS) terminals and also permit cash withdrawal at ATMs / Banking Correspondents (BCs). However, cash withdrawal at POS is permitted only upto a limit of Rs.1000/- per day subject to the same conditions as applicable hitherto to debit cards (for cash withdrawal at POS).
Eg. M-Pesa is an open wallet run by Vodafone in partnership with ICICI Bank. Axis Bank's e-Wallet Card', can used for making payments on sites that accept Visa cards, with a minimum limit of Rs 10, and a maximum limit of Rs 50,000, and a validity of 48 hours.

Figure 2

Mobile Wallet Industry in India



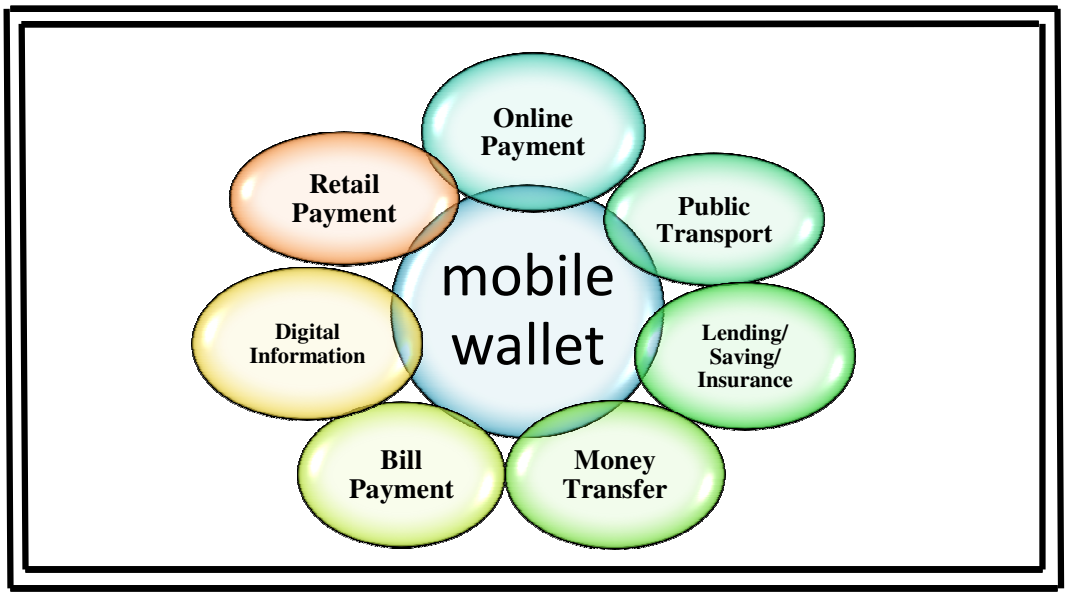
The e-wallet industry is over a decade old in India. The first such product was Wallet365.com, launched by the media major Times Group in association with YES Bank in 2006 and Oxigen wallet is India's first no-banked mobile wallet, approved by RBI in 2013.By 2017, there were between 80-90 players, of which some 55 were non-banking players like Paytm, Mobikwik, Oxigen, and ItzCash. Market leader Paytm alone had over 200 million users by the end of March 2017. The table below names the prominent industry players, according to the Pradhan Mantri Jan Dhan Yojana, (Table: 1).

Table: 1

Prominent Players of Mobile Wallet Industry in India

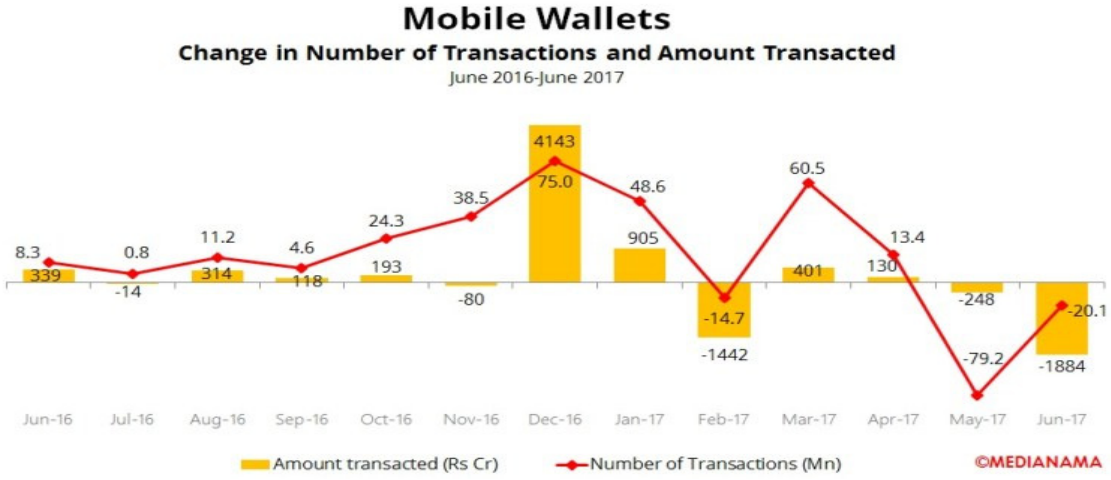
E-wallet	**Industry**	**Company**	**Bank Transfer Allowed?**
Paytm	Private	One97 Communications	Yes
MobiKwik	Private	One MobiKwik Systems Private Limited	Yes
Oxigen Wallet	Private	Oxigen Services India Pvt. Ltd.	Yes
Citrus Wallet	Private	Citrus Pay	Yes
ItzCash	Private	Itz Cash Card Ltd.	Yes
Freecharge	Private	Snapdeal	No
Axis Bank Lime	Banking Industry	Axis Bank	No
Airtel Money	Telecom Industry	Airtel	Yes
ICICI Pockets	Banking Industry	ICICI Bank	Yes
Jio Money	Telecom Industry	Reliance	No
mRupee	Telecom Industry	Tata Teleservices Ltd.	Yes
SBI Buddy	Banking Industry	State Bank of India	Yes
Vodafone M-Pesa	Telecom Industry	Vodafone	Yes

Figure: 3
Services provided by Mobile Wallets



While digital payments were turning popular anyway, the government gave it a major push in year 2016. On 8, November 2016, demonetization led to an acute cash crunch in the economy which aimed at curbing black money and weeding out counterfeit notes. The drastic move also nudged more Indians towards digital payments. In the first few hours after demonetisation, Paytm saw an eye-popping 435% increase in traffic, a 200% growth in app downloads, and a 250% rise in overall transactions and transaction value. Rival Mobikwik, too, witnessed a 40% jump in app downloads after demonetisation. The government's payments platform, Bharat Interface for Money (BHIM), which is linked to more than 30 private and public sector banks, had been used by 12.5 million people by February 2017.

Figure: 4

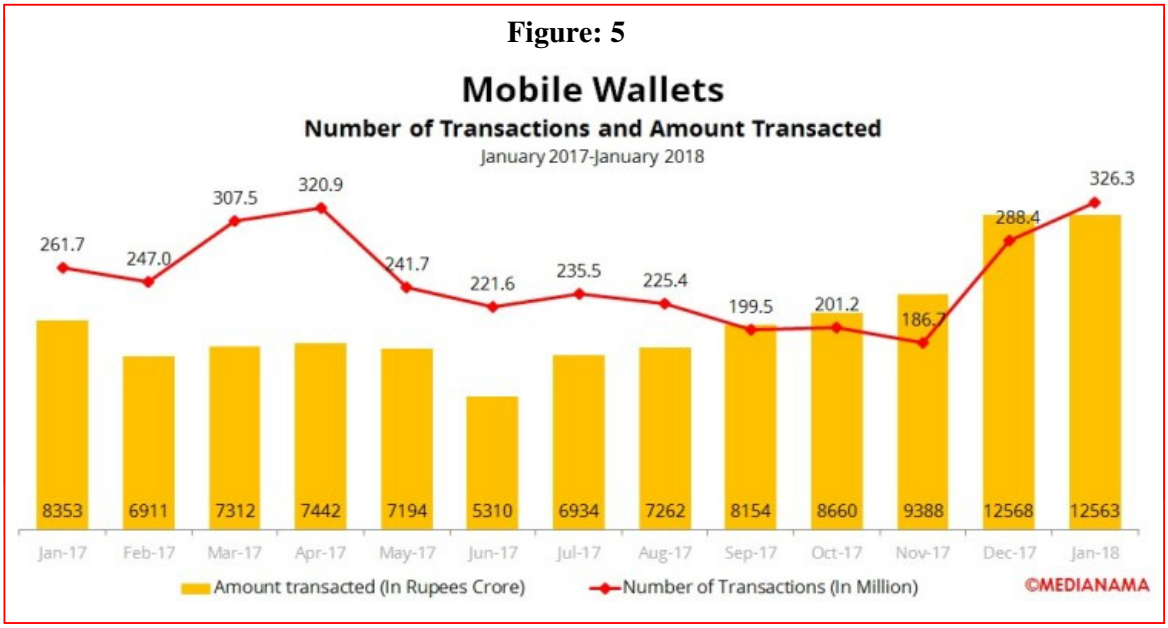


(Source: Medianama)

For the month ending January 31, 2018, number of transactions using Prepaid Payment Instruments (which includes both Mobile Wallets and PPI Cards combined) increased by 13% to 361.2 million as compared to 319.9 million in December 2017, and grew 22% compared to 295.8 million in January 2017, according to data from the Reserve Bank of India. The amount transacted went up 3% month on month to Rs 14,771 crores from Rs 14,334 crores, while grew 34% year on year from Rs 11,001 crores in January 2017.

Much of the growth happened in Mobile Wallets, which increased 13.2% month on month to 326.3 million transactions from 288.4 million, and up 25% year on year from 261.7 million transactions in January 2017. Amount transacted using Mobile Wallets decreased marginally to Rs 12,563 crores from Rs 12,568 crores and grew 50% year on year from Rs 8,353 crores in January 2017.

Figure: 5



(Source: Medianama)

Adoption of a Technology

Adoption is the framework of acceptance that is being to accept a new technology as it is introduced by the consumer. Mobile has become a primary device shaping our daily lives which is widely used for the purchase and payment for goods and services. This adoption of mobile technology in financial services can be further studied to analyse it in an objective manner through the technology adoption theories. In short, it will be useful to understand more about the relationship between the use of technology adoption and mobile wallets among consumers.

Theories of Technology Adoption

There are various comprehensive theories on different perspective of a consumer adoption of technology. These are as follows:

1. Innovation Diffusion Theory (IDT)
2. Social Cognitive Theory
3. Theory of Reasoned Action (TRA)
4. Theory of Planned Behaviour (TPB)
5. Decomposed Theory of Planned Behaviour (DTPB)
6. Technology Acceptance Model (TAM)
7. Technology Acceptance Model 2(TAM2)
8. Combined TAM and TPB(C-TAM-TPB)
9. The Unified Theory of Acceptance and Use of Technology (UTAUT).

Out of these nine theories, only **Technology Acceptance Model (TAM)** is being adopted for the purpose of research. The Technology Acceptance Model (TAM) is one of the most utilised models in Information System (IS) research, and it has emerged as one of the most influential models in Information System research (Davis & Venkatesh, 1996; Gefen & Straub, 2000; Mathieson, 1991). This theory is mainly based on the idea of technology adoption, Technology Acceptance Model (TAM) replaced Theory of Reasoned Action (TRA) with two technological accepted features, perceived usefulness (PU) and perceived ease of use (PEOU) which have been proven to be of significance to the adoption of technologies.

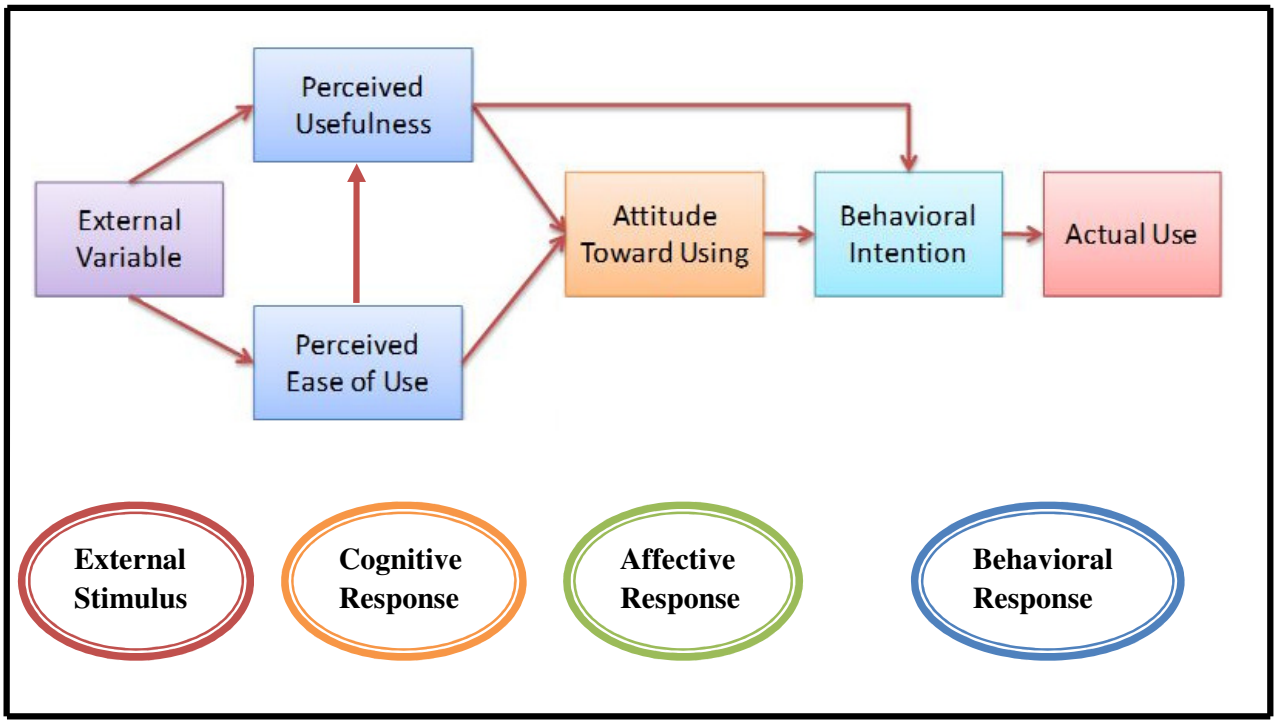
Table 2
Technology Acceptance Model (TAM)

Adapted From	Construct	Definition	Developed
Technology Acceptance Model (TAM)	**Perceive Ease of Use**	**The degree to which a person believes that using a particular system/technology will improve his or her action or will be effortless.**	**Fred Davis,1989**
	Perceived Usefulness	**The degree to which a person believes that using a particular system/technology would enhance his or her performance.**	
	Behavioral Intention to Adopt	**Captures an individual's expressed intent to use the technology in a model comprising several types of factors.**	

Davis (1989) developed the Technology Acceptance Model (TAM) to explain user acceptance of new computing technologies in the organization context. This model was

extended from the TRA (Ajzen & Fishbein, 1980). Technology Acceptance Model (TAM) suggests that when users are presented with a new technology, a number of factors determine their decisions about how and when will use it.

Figure: 6
Technology Acceptance Model



Source: Davis, (1989)

It is one of the most popular research models to predict use and acceptance of information systems and technology by individual users. TAM has been widely studied and verified by different researchers that examine the individual technology acceptance behaviour in different information systems constructs. According to Technology Acceptance Model (TAM), Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) are the most important determinants of actual system use.

- **Perceived Usefulness** – refers to how much the user believes that the technology will help to improve the performance or their efficiency
- **Perceived Ease of Use** – refers to what extent that the user is comfortable in using the features of the technology.

These two beliefs (Perceived Usefulness and Perceived Ease of Use) predict attitudes which in turn influence intended use of a technology. This intention then consequently impacts behaviour of actual system usage.

Technology Acceptance Model (TAM) and Adoption of Mobile Wallets

1. Understanding consumers need is the prime factor for the success of mobile services. If services and mobile technologies are enhanced for providing financial services the consumer would be able to utilize them in an effective
2. Adoption and Acceptance of a new innovation or service by consumers reflects the value of the financial service. As it is already been justified that any new technology services require a precise development process and a large investment for the associated research and development, if the financial services are unable to meet the expectations of consumers and to satisfy them, service providers will lose their core competence and values (Shapiro & Varian, 1999).
3. Roger (1995) concluded that adoption process is a decision process, and decision process depends on many external factors related to the services. For that reason, there is an urgent and crucial need to understand these factors. Understanding these factors would be beneficial for service providers to build constructive relationships with customers in order to increases the reach of financial services through mobile technology.

This research enhances the understanding of the factors that that influence consumer acceptance of mobile payments in the light of the Technology Acceptance Model (TAM).

Statement of the Problem

With the advent of the digitalization the inter connection of technology and financial services grew. Technology has increased the reach of financial services and supported the consumers by making their life easy. Perhaps one of the most prevalent issues is the choices to use the most effective equipment or software to increase efficiency. The mobile wallets, like many other digital payment services help to increase commerce and trade by easing the payments and withdrawals. The objective of financial inclusion can also be achieved if these financial technologies are well studied. The adoption of mobile wallet services can be studied through models and framework for a better understanding. Technology Acceptance Model is one of the widely used adoption model. The present study will study the applicability of the variables of the Technology Acceptance Model on the adoption of mobile wallets.

Review of Literature

Table: 3

NATIONAL	INTERNATIONAL
10	26

Table: 4

YEAR	NUMBER OF PAPERS
2017	6
2016	10
2015	6
2014	3
2013	3
2012	7
2011	1

Table: 5
CITATION TABLE

TITLE	JOUNAL NAME	YEAR	Citation
Impact and Importance of Cashless Transaction in India.	International Journal of Current Trends in Engineering & Research (IJCTER)	2017	1
Improving service Quality through Digital Banking-Issues and Challenges	International Journal of Recent Scientific Research	2017	-
An empirical study on consumers adoption of mobile wallet with special reference to Chennai city	International Journal of Research Granthaalayah	2017	-
Study of mobile banking application usage in various sectors of society	International Journal of Scientific & Engineering Research	2017	-
E-Wallets and its Future in India	Journal of Applied Computing.	2017	-
Demonization to Digitalization: A step Towards Progress	Management and Economics Research Journal	2017	2
An Empirical Study about Awareness of Paperless E-Currency Transaction like E-Wallet Using ICT in the Youth of India	Journal of Management Engineering and Information Technology (JMEIT)	2016	1
The Future of the Mobile Payment as Electronic	European Journal of	2016	3

Payment System	Business and Management		
Adoption of digital wallet by consumers	Bharati Vidyapeeth's Institute of Management Studies & Research	2016	5
Preference towards mobile wallets among urban population of Jalgaon city	Journal of Management (JOM)	2016	7
A Study of Consumer Awareness towards E-Banking	International Journal of Economics & Management Sciences	2016	1
M-Services in India: A Study on Mobile banking and applications	Gian Jyoti E-Journal	2016	1
Bridging the technology gap in financial services boardrooms	Accenture Strategy	2016	-
Fintech and the evolving landscape: Landing points for the industry	Accenture Consulting	2016	5
Mobile Wallet: An upcoming mode of business transactions	International Journal in Management and Social Science	2016	3
ARE DIGITAL WALLETS THE NEW CURRENCY?	Apeejay Journal of Management and Technology	2016	1
Trends in mobile payments research: A literature review	Journal of Innovation Management	2015	47
A proposed model of e-trust for electronic banking	Management Science Letters	2015	7
A Study on New Dynamics in Digital Payment System– with special reference to Paytm and Pay U Money	International Journal of Applied Research	2015	2
Awareness and adoption of technology in banking especially by rural areas customers: a study of Udaipur rural belt	Pacific Business Review International	2015	24
Technological Innovations in Indian Banking Sector	International Journal of Scientific Engineering and Research (IJSER)	2015	2
Technology adoption: A conjoint analysis for consumers' preference on future online banking services	Science Direct	2015	30
Empirical investigation of internet banking usage: The case of Turkey	Science Direct	2014	7
A Novel Interoperable Mobile Wallet Model with Capability Based Access Control Framework.	International Journal of Computer Science and	2014	2

	Mobile Computing		
Technological innovations in Indian banking sector: changed face of banking.	International Journal of Advance Research in Computer Science and Management Studies	2014	13
A Study on Mobile payment in mobile e-commerce	International Journal of Enhanced Research in Management and Computer Applications	2013	-
Internet banking in India – a perspective on benefits and challenges involved	International Journal of Engineering, Business and Enterprise Applications (IJEBEA)	2013	57
Understanding the adoption of mobile banking Services: an empirical study	A Journal of Management	2013	4
M-Wallet: An SMS based payment system	International Journal of Engineering Research and Applications.	2012	
Technology Adoption and Indian Consumers: Study on Mobile Banking	International Journal of Computer Theory and Engineering	2012	37
Mobile banking in India: barriers in adoption and Service preferences	A Journal of Management	2012	8
E-banking: challenges & policy implications	International Journal of Computing & Business Research	2012	9
An Empirical Study of Rural Customer's Satisfaction from E-Banking in India	Journal of Internet Banking and Commerce	2012	7
Technology adoption and performance impact in innovation domains	Industrial Management & Data Systems	2012	36
Technology Acceptance Model: A Survey of Literature.	International Journal of Business and Social Research (IJBSR)	2012	87
Mobile Money and Payment: a literature based on academic and practitioner-oriented publications (2001-2011).	Proceedings of SIG GlobDev Fourth Annual Workshop, Shanghai, China December 03, 2011	2011	49

Study Reference	Research Methodology	Tools and Techniques	Findings	Observation
Shendge, M. P. A., Shelar, B. G., & Kapase, A. P. S. S. (2017). Impact and Importance of Cashless Transaction in India. *International Journal of Current Trends in Engineering & Research (IJCTER), 3(4), 22-28.*	The study is based on secondary sources of data/ information.	Different books, journals, newspapers and relevant websites have been consulted in order to make the study more effective	Based on the secondary sources, findings has been made from RBI report, NOV-DEC-2016 total value transaction of using E-wallet was 50.74 and 97.70 (Rs. In Billion) respectively and in JAN-2017 it is increased upto 108.69 on this basis; it has finds that E-wallet payment method is more preferred by customers than any other payment methods.	This study is restricted to secondary data. India is gradually transitioning from a cash-centric to cashless economy as it has been seen from the RBI reports that e-wallets has formed an huge impact towards cashless transaction in India.
Mathangi R, Latasri O.T.V and Isaiah Onsarigo Miencha (2017). Improving service Quality through Digital Banking-Issues and Challenges *International Journal of Recent Scientific Research*	This article is based on conceptual study.	Authentic reports, Journals, Articles.	The basic need of this study is to evaluate the digital push in Indian global market and to find a strong correlation between business performance and smarter technologies. In this era new financial technology is being shaped by changes in market conditions, new regulations and shifts in customer's demands and behaviour which will form an improvement in service quality through digital banking.	This paper described the new era of India where lot of resources and efforts are put for a smooth transition towards the digital payment. This can be done by reducing the issue and challenges and by providing an secure and save digital banking system towards the society.
Manikandan, S., & Jayakodi, J. M. (2017). sAn empirical study on consumer adoption of mobile wallet with special reference to Chennai city. *International Journal of Research-Granthalaya*, *5*(5),	This study is based on primary data collected from 150 respondents in Chennai city by means of structured questionnaire.	Z-test, chi square test, ANOVA-Between group and Within group, Correlation and Regression, Mean,	In this study, mobile wallet usage awareness has spread among the people in India due to government policy of demonetization and because of this forcefully induced the usage of mobile wallet has shown tremendous growth in adoption in the forthcoming years. The security issues and risk	The paper focuses on the usage of mobile wallets. It stresses that they are very important in the daily life of people. As many new technological advancement has affected the consumer's decisions to adopt mobile wallets the study

107-115.			factors are reduced and it will automatically increase the adoption of mobile wallet.	highlights them all. Basically, mobile wallet usage awareness is spread among the people in India due to government policy of demonetization and this as forcefully induced the usage of mobile wallet.
Brid Sagar, Agrahari Kajal, Chandra Mrs.Priya. (2017). study of mobile banking application usage in various sectors of society. *European Journal of Business and Management.(6), 52*	Primary data collection of Google Form survey as online survey with the help of questionnaires .	Chi Square test, Z- test, Regression, Likert Scale through Internet and internet-mediated questionnaires .	This research focuses on the study of various mobile banking applications which is used by different sectors of society. Result has been analysed on different sectors where: *50.9% of the individual prefer to Paytm and rests of them include others on another part 50% percent of people have answered that the Debit Cards is best option for making cashless payments.	The study has described well the usage of mobile banking applications. The results display maximum users of Paytm in comparison to Freecharge. Hence it can be observed that digital wallets and mobile banking is the future.
Sharma B., Vermani Dr.S. (2017). E-wallets and its Future in India. *Journal of Applied Computing*.	The descriptive data has been used to analysis the study.	Published papers, articles, Journals, authentic reports and survey have been considered for further study.	People are unsure about the security of the transactions, unfamiliar with mobile apps , Inability to adapt. A digital wallet is operative to receive, maintain, and allow the retrieval of various forms of enhancements thereto, such as an electronic coupon, an electronic gift, an electronic discount, and the like.	The present study focuses on the factors that can affect a consumer's decision to adopt digital wallet as a mode of online payment. Apart from this, the study also attempt to find out the various risks and challenges faced by users of digital wallet.
Bhatnagar Dr. Harshita. (2017). Demonetization to Digitalization: A Step Toward Progress. *Management and*	The secondary data has been used to analysis the study.	Secondary Resources like newspapers, Journals, authentic Reports etc has been taken	As demonetization is like greasing the wheels of the economy and transforming India into Digital India by providing various laws and strategy towards the	This paper concludes that demonetization should be welcomed as a revitalizing and positive step toward massive digital transformation of the

Economics Research Journal		into consideration.	economy. Customer Education, Monetary Benefits, Cyber security Backed by Cyber Laws and Acts are some of the strategy to promote digitalization in India.	country.
P. Kalyani, (2016). An Empirical Study about Awareness of Paperless E-Currency Transaction like E-Wallet Using ICT in the Youth of India. *Journal of Management Engineering and Information Technology (JMEIT)Volume-3, Issue -3, Jun.2016,ISSN: 2394-8124*	Based on primary as well as secondary data has been considered to analysis the research	Primary source: Chi Square test, Regression and Correlation, SPSS software, Questionnaire - Secondary source: Authentic reports, Journals.	This paper is focusing upon the paperless e-currency transaction that is getting popular all over the world. It is an effort to explore the awareness of this new payment processing system in youth ass they are more frequently using a few services mostly for recharging the DTH and paying bills	It has been observed that in terms of traditional banking and modern banking youth ingoing to prefer e-wallet for their further transaction because of ease of use and better encrypted reliability of secure and fast transaction facilities
Bezovski, Z. (2016). The Future of the Mobile Payment as Electronic Payment System. European *Journal of Business and Management, 8(8), 127-132.*	Secondary data has been analyzed to evaluate the future aspects.	MEF's third annual Global Mobile Money report 2015, GSMA State of the Industry report for 2013, Oracle, 2014.	There are 6 adoption determinants of mobile payment has described as Advantages, Convenience, Complexity, Costs, Trust in services, Security risks On these factors the impact on adoption will be analysis where advancement of technology, electronic payment system has taken many new forms like debit & credit card, electronic cash, smart cards, digital wallets contactless payment methods, and mobile payment etc which has indirectly grab the trust of consumers and changed the habit of using mobile phone.	The paper has described development of internet and the arrival of e-commerce in the payment process by providing verity of payment option towards the society. As this paper, has considered all the factors and the modes of mobile payment for a promising future of mobile payment systems which have to be better integrated with present telecommunication and financial infrastructures.
Rathore, H. S.	Primary study	Structured	Adoption of digital	This research

(2016). Adoption of digital wallet by consumers. *BVIMSR's Journal of Management Research, 8(1), 69.*	analysis has been done for examine the digital wallets	questionnaire, Chi Square Test, Z-test, ANOVA- within and between groups.	wallets is quickly becoming the mainstream mode of online payment as it shows convenience in buying products online, brand loyalty for usefulness, security and safety of the funds is the most challenging issue for the users. It was found that digital wallet can be an alternate choice for online payments.	concludes on the adoption of digital mobile wallets. It depicts that the consumer can nowadays use their smart phones to make money transaction or payment by using applications installed in their phone more conveniently.
Sardar Dr.Ramesh. (2016), Preference towards mobile wallets among urban population of Jalgaon city. *Journal of Management (JOM).*	Primary data has been used to analyse the paper.	Chi-square and T test was used to analyse the data.	The present study is focused on preference towards mobile wallets among the urban population of Jalgaon city and effectively analyzed the impact of demographic variables on the usage of Mobile wallets usage: *29% -transfer money *90%-instant payment *42%-uses other cashless payment option. *81.7%-security is element.	This research paper demonstrates that the electronic payment system has been a boon for consumers as most of the urban population of Jalgaon city are prefer the mobile wallets for their necessary payments.
D Amutha. (2016). A Study of Consumer Awareness towards e-Banking. *International Journal of Economics & Management Sciences.*	Data for this investigation were collected from primary as well as secondary sources in under District of Tamil Nadu.	Statistical measures such as simple percentage analysis, averages, F-Statistic, chi square test and probability analysis were used. Secondary data such as collected from books, journals, newspapers, internet and	The researcher finds that the banks have to take necessary steps to educate the customers regarding the new technology and other services offered by the banks. It leads that 58.89% likes to use banking transactions, 23.33% leads towards security issues, 50% feels it's difficult., 30% feels it's complex to use and12.22% feels it's risky in nature.	The research is useful in understanding the consumer awareness of e-banking system and what types of risk involved in e-banking system. On the other hand major respondents are likely to operate through e-banking for their transaction.

		periodicals.		
Sharma Nisha and Kaur Rupinder deep. (2016). M-Services in India: A Study on Mobile banking and applications. *Gian Jyoti E-journal, 10th International Conference on 'New Trends in Business and Management: An International Perspective' (9).*	This paper is based on secondary data only.	Data have been found on various websites, Reports of RBI, KPMG, IAMAI and various others. The data was also collected from journals and articles published in newspaper.	The paper demon sates that M-banking is rapidly growing in finance sector for the transactions and payment settlement. Basically, more than 70% of private banks have captured the mobile banking share from which ICICI Bank was the largest bank in India.	From the observation of the paper it can be concluded that awareness towards technology will show positive results for the new innovations in mobile banking and their application towards users in India. As mobile banking websites are more preferable rather than traditional banking method by the customers in today's environment.
Lumb R., Macchi M. and Moreno P. J. (2016). Bridging the technology gap in financial services boardrooms. Accenture Report	Primary data collection of the global financial technology.	Global Survey has been done to analysis the board–level technology. With the help of Percentage method further analysis has been made by researchers show the appropriate data.	Digitalization is not only means new banking channels as it is also offers unique opportunities for banking sector to drive growth and profitability.	Digital revolution is coming with new aspects and aspirations with the waves of innovation and the role of technology in financial domain which is continuously changing.
Skan, J., Dickerson, J., & Gagliardi, L. (2016). Fintech and the evolving landscape: landing points for the industry. Accenture Report	Primary data collection of the global financial technology firms 2010-2015.	Global Survey has been done to analysis the global Fintech Investment and services. With the help of Percentage method further analysis has been made by researchers to show the appropriate data.	Overall in these report, new facts and figures has been described in recent year. Major progress in terms of market, consumer has been accounted for in the year 2015 which is 94% where as GAFAA has created a new evolution in the terms of financial technology.	From this report, the analysis has been made on the global financing activity from venture capital, government funds, and mostly on banking technologies towards the growth rate of fintech as these facts and figures is more useful to analysis the upcoming growth towards the economy.

Painuly Dr. Poonam, Rathi Shalu. (2016). Mobile Wallet: An upcoming mode of business transactions. *International Journal in Management and Social Science.(12)*	Secondary data has been collected to provide complete note on mobile wallets.	Reports by RBI, Newspapers, Journals, Books, and Articles etc have been examined to analysis the research study.	On the basis of various authentic reports, the present status of mobile wallet users in India- is 140-150 million as per the RBI reports, there are about 21 million credit card users in India (till March 2015) which shows that mobile wallet usage among the consumers has been increasing on a very large scale.	It has been observed that this paper provides all the relevant information related to mobile wallets as it has described all the types, their importance as well as their relevance towards the society use.
Batra R. and Kalra N. (2016). ARE DIGITAL WALLETS THE NEW CURRENCY?.*Apeejay Journal of Management and Technology.*	Primary data has been considered to analysis the facts of research.	*Chi Square Test *T-test *Regression and Correlation	The present research aims to empirically examine the adoption patterns of digital wallets by the respondents, the results indicate that there exists a huge untapped market for digital wallets both in terms of increasing awareness as well as its usage.	The study makes a valuable contribution to research in the area of financial technology, by exploring digital payment systems in India.
Dennehy, D., & Sammon, D. (2015). Trends in mobile payments research: A literature review. *Journal of Innovation Management, 3(1), 49-61.*	Based on review of literature aimed to identifying the key research themes and methodology.	In order to uncover these trends the authors reviewed the top twenty cited papers since 1999 and the twenty most recently published papers on m-payments since August 2014.	Main focus on theoretical and empirical papers were Legal, Regulatory & Standardisation, Technology, Security & Architecture, Social Cultural & Economic, Multiple Categories A limitation of this research is based on Google Scholar database as it is universally accessible to researchers.	The study shows that there are influential factors that shape the Trends in mobile payment services leads be an key driver for the adoption for future payment system.
Yousefi, N., & Nasiripour, A. (2015). A proposed model of e-trust for electronic banking. *Management Science Letters, 5(11), 1029-1040.*	Primary based data has been analyzed.	*Linear Structural Relation *Root Mean Square Error of Approximation *Chi-square	The purpose of this paper is to investigate which factors are influencing on consumer's trust in e-banking services. For this they have analysis four different factors like Quality, Website,	The result of this paper has revealed that the effect of e-commerce has been increased their size of dependence among the customers by achieving their trust level by providing an

		Index divided by the Degrees of Freedom *Nor med Fit Index *Goodness of Fit Index *Adjusted Goodness of Fit Index	Banking Feature and Consumer characteristic which will leads towards increasing e-banking services.	innovations towards them either it has been described that there is no relation between customers trust and demographic variable but the effect of e-banking services shows the incredible increase in customers trust just because of quality services.
DV shreE V, N Yamuna,G Shree N.(2015). A Study on New Dynamics in Digital Payment System-with special reference to Paytm and Pay U Money. *International Journal of Applied Research.(5)*	The research methodology is primary data and secondary data.	Chi-Square test, T-test and Structured questionnaires	The study is focusing on the impact of these new digital payment systems on customers and problems encountered. Basically people are using these application in higher percentage because Pay tm and Pay u Money is giving 2 level security authentications to safeguard their payment details, both these are providing easy payment structures compared to Digital payment system	In today's busy life, people doesn't have time to contribute their seconds on their personal work so as new dynamic digital payment system has been introduced on the way to customers and this paper has shown all the perceptive ways towards customers payment system with reference to Pay tm and Pay U Money.
Bhatnagar Dr. Harshita. (2015). Awareness and Adoption of Technology in Banking Especially by Rural. Areas Customers: A Study of Udaipur Rural Belt. *Pacific Business Review International* (7).	Primary and secondary data has been used to analysis the study.	Proportionate schedules method, Chi-Square test, ANOVA and Correlation test, mean, median, mode, standard deviation, Journals, Articles, Newspapers, Authentic reports by government.	Indian banking industry has undergone major changes due to economic liberalisation and globalisation which led to managerial innovations, information technology revolution, increasing competition, changing customer requirements and financial sector reforms which have made the banking sector to create awareness for adoption of technology by consumers from rural areas.	This paper presents the preliminary findings on investigation of the level of the customer's awareness as well as adoption of banking services by the rural customers based on demographics, bank type, and familiarity with Computer/internet facilities provided by banking sector.
Shet, A. R. (2015). Technological	Secondary data has been	Libraries, articles,	The banking sector has improved manifolds in	This study mainly focus on different

Innovations in Indian Banking Sector. Transfer. *International Journal of Scientific Engineering and Research (IJSER)* 06.	used to investigate the technology innovations in Indian banking systems.	websites, various books and journals are some important sources of data are the sources for gathering information	terms of Technology, Deregulation, Product & Services, and Information Systems as banks have to adopt a holistic approach to fulfil the ever changing needs of customers and to grab a better market share.	technology innovations in Indian banking sector which have contributed to development of Indian banking system with references towards facts and figures which would helps in analysing the economy growth.
Dauda, S. Y., & Lee, J. (2015). Technology adoption: A conjoint analysis of consumers′ preference on future online banking services. *Science Direct. Information Systems, 53, 1-15.*	Primary data has been used to examine with the help of questionnaires different aspects of customer's behaviour towards technology adoption.	Percentage Method, Chi-Square method, Z-test	Findings from the study are profound that, the impact on important implications for product and service selection, marketing campaigns, and operating strategies for Nigerian banks and other financial organizations has a positive impact on customer's behaviour towards adoption of technology.	It has been observed that the main moto of this research paper is to understand the banking customer's behaviour and future online services on the basis of conjoint analysis to know the different aspects of consumer behaviour towards technology adoption.
Daneshgadeha S., Yıldırıma Ö. S. (2014). Empirical investigation of internet banking usage: The case of Turkey. *Science Direct*	This study follows quantitative approach.	Statistics were done by PASW Statistic s 19 for measurement model and structural model analysis were done by SmartPLS 0.2 and T-test is used for sampling.	The results reveal that customers prefer to use internet banking, because they perceive it as useful and easy to use. Furthermore, compatibility of internet banking with customers' life and work styles is found to be the crucial driver of internet banking usage where as personalized and alliance services are determined as the additional factors which encourage customers to use internet banking as well.	It has been observed that customer preference towards internet banking usage will lead to change in the life style and habit. The use of the internet for their banking purpose will increase in the coming times drastically.
Neeharika P & V, Sastry N. (2014). A Novel Interoperable Mobile Wallet Model with	The study is exploratory and descriptive in nature.	Algometric	It has finds that it has made an important contribution towards the development of a mobile wallet industry that can work across various	From this study it has been observed that interoperable mobile wallet model has leads to get rid of the plastic cards from

Capability Based Access Control Framework. *International Journal of Computer Science and Mobile Computing.*			platforms. As security is the major concern when it comes to finance related information, the study addresses the security issues by giving access control model that works towards interoperable mobile wallet.	their wallet and also lead to a wider acceptance of mobile wallets globally.
Malik, S. (2014). Technological innovations in Indian banking sector: changed face of banking. *International Journal of Advance Research in Computer Science and Management Studies, 2(6).*	Secondary data has been used to collect different banking services. As with the help of literature review different authors have given their views on technology.	Libraries, articles, reviewed papers, websites, various books and journals are some important sources of data are the sources for gathering information.	Banks have to adopt a holistic approach towards technological innovations for the growth of banking sector. Primary factors of growth are mobility and customer convenience and banks are continuously exploring new technology, with terms such as mobile solutions and cloud computing is being used with greater regularity.	As secondary data has been consider no realistic approach has been considered for the innovations in banking sector as it has seen that various innovations have been made in Indian banking system which have contributed a lot in exploring the new technology towards the society.
Kumar, B. (2013). A Study on Mobile payment in mobile e-commerce. *International Journal of Enhanced Research in Management and Computer Applications, 1-8.*	Primary data has used to review to analysis the data.	Statistical techniques such as percentage method, chi-square method and super SET protocol	This paper describes different trends has direct impact on online payment industry as it includes: shifting of customer towards debit card usage, growing social networking, online game, technological innovation, e-banking transaction, online shopping roles etc will leads towards new era of payment system.	It has observe that mobile payment system has increased the market share as well as create an conveniences for the consumer for their payment transaction through mobile wallets without any issue or hurdle.
Sikdar P., Makkad M. (2013). Internet banking in India-a perspective on benefits and challenges involved. *International*	The research study was undertaken through primary survey carried out by the means of a	Precision and random sampling technique. Chi-Square test, ANOVA, Z-test.	This paper introduces to internet banking in addition to the bank's customers as well the banking organization as commercial banking operations are mainly focused on direct selling	It has been observed that this study remained limited to major Indian metropolitan cities and tier-I cities, given the fact internet banking has

Journal of Research in Business Management, 1(1), 19-26.	structured online questionnaire.		and other activities like adoption of technology. Many new innovations and polices has been made by private sector bank towards both retail and corporate customers. . In both the aspects internet banking has provided various benefits towards the economy.	not yet reached the sizeable portion comprising of rural areas of country. The major reasons behind this trend have been lack of effective internet penetration and adequate banking infrastructure in these areas.
Witeepanich, C., Emklang, N., Matsmak, J., Kanokviriyasanti, P., & Chanvarasuth, P. (2013). Understanding the adoption of Mobile banking Services: an empirical study. *In Proceedings of the 4th International Conference on Engineering, Project, and Production Management (pp. 282-291).*	Primary data has been used to analysis the records as well as provide empirical study for understanding the mobile banking services in Thailand (Bangkok).	Z-test, Chi-Square test, ANOVA-within and between groups.	Five factors has been focused to study mobile banking adoption in Thailand are social Influence, Trust, Facilitating conditions, User Perception, and User Demographic which shows that the most important factors influencing mobile banking adoption is trust.	A key contribution of this study is for the bank to create a policy to entrust customers more on their service systems as they should make use of social influence to promote their service and attract people more..
Bamoriya, D., & Singh, P. (2013). Mobile banking in India: Barriers in adoption and service preferences. *A Journal of Managemen, Vol.5.No. 1,pp 1-7,2012*	Cross sectional descriptive study has been used to find out the relevant data and facts about barriers and adoption of mobile banking.	Product moment correlation, One way Kolmogorov-Smirnov test and Frequency analysis and SPSS 17 were used to analysis the research.	Findings suggest that customers' security concern is the major barrier in adopting mobile banking services out of Network problem, Insufficient operating guidance, Cost per transaction, using ability.	It has observed that, mobile banking is considered as new era of banking sector but still due to some security reasons these services have not been used by customers hence they are avoiding mobile banking.
Ashok, A., Gajera, S., Chakraborty, J., Arolker, P., & Rai, N. (2012). M-	Secondary data has been used to evaluate the	Libraries, Websites, Authentic reports,	This paper describes an efficient alternative to the traditional and current payment systems	It has been observed that M-Wallet will be more of an extension of the existing

Wallet: An SMS based payment system. *International Journal of Engineering Research and Applications. ISSN: 2248-9622.*	study.	various books, articles and journals are some important sources of data are the sources for gathering information.	as Security Convenience, Time, Verification process, Bank account, Ease of Use, Requirement for payee are some of the parameters which will be consider towards technology adoption. M-wallet is an innovation as it is faster, safer and network independent technique for the customer use.	payment infrastructure that allows people to deal with their financial needs in a timely and convenient way.
Safeena, R., Date, H., Kammani, A., & Hundewale, N. (2012). Technology adoption and Indian consumers: study on mobile banking. *International Journal of Computer Theory and Engineering, 4(6), 1020.*	Primary Data has been used to collect the nature of customers toward banking and growing tendency toward online financial institutions.	Likert scale, Chi-square test, Mean Deviation has used through Convenience sampling method	The key intention of this paper is to evaluate those factors that manipulate the nature of customers towards mobile banking and their growing tendency towards the online financial institutions. Study reveals on 4 factors: 1. Perceived usefulness- 22.51% 2. Perceived ease of use – 41.63% 3. Awareness - 59.85% 4. Perceived risk – 69.94%	As this paper has been consider any new forms towards mobile banking have been offered by retail banks towards the society but still adoption has been dependent on consumer's perception and attitude. As far as customers are concerned they feel high percentage of risk in adoption.
Bahl, Dr. S. (2012). E-Banking: Challenges & Policy Implications. *International Journal of Computing & Business Research, 229-6166.*	Secondary data has been used to evaluate the fact.	Authentic Reports from government sites, Journals, Articles, Newspapers, Library books etc has been considered to analysis the study.	This paper aims to describe the challenges of E-banking and further provides efforts towards policy implications to make E-banking more effective for customers and for society. The national regulators have modified their regulations to achieve their main objectives like Ensuring the safety and soundness of the domestic banking system, Promoting market discipline,	As per the secondary data it has been pragmatic that this paper has shown many new challenges for country authorities in regulating and supervising the market as well as designing and implementing the macroeconomic policy implications to make E-banking more effective.

			Protecting customer rights and the public trust in the banking system.	
Sharma, N. (2012). An Empirical Study of Rural Customer's Satisfaction from E-Banking in India. *Journal of Internet Banking and Commerce, 17(3), 1.*	The study is primarily based upon primary data collected through a questionnaire from rural users of e-banking channels from different villages of Punjab and Haryana (India) with 9 general questions and 17 relating to variables.	Likert's five-point basis, Regression analysis and ANOVA	The study found that rural customers are quite satisfied with the provisions of updating, accuracy of transactions and convenience of e-banking. However, they were not found to be much satisfied with the regulatory mechanism and compensation given in case of fraudulent attack by unauthorized person or error by bank. Further they expect better services should be provided for differently able persons.	The study attempts to evaluate the perception of rural customers which has not been yet studied as all the work has been conducted in the field of urban population. The present swot is to analysis the rural customers from e-banking in India. Undoubtedly e-banking has a strong catalyst for the economic development but still it has been seen its propensity has been lacking in the rural sector.
Plewa C. and Troshani I., Francis A., Rampersad G. (2012). Technology adoption and performance impact in innovation domains. *Industrial Management & Data Systems.*	The paper draws on qualitative and quantitative data analysis.	T-test, Chi-Square test, Multiple Regression analysis were used to analyse the data.	The purpose of this study is to investigate the adoption of innovation management applications (IMAs) and the performance impact towards new innovations. The paper contributes to literature by isolating determinants like Perceived usefulness, Attitude towards Technology ,Perceived ease of use, Compatibility, Need for interaction, Intention to use, Innovation process Performance that affect on adoption of Information Management Applications (IMAs).	As this study is based on both qualitative and quantitative data towards advancing knowledge relating to the adoption of IMAs. It contributes to extant literature by providing a model that can explain IMA technology adoption and performance innovation processes.
Surendran P.	Secondary	Based on	The article has explained	The technology

(2012). Technology Acceptance Model: A Survey of Literature. *International Journal of Business and Social Research (IJBSR)*	Data has been used to analyse the research.	Literature Review	the technology acceptance model and the different crucial factors which will show their relevance in adoption process towards consumer. The study also reviewed the application areas where technology acceptance model can be implemented.	acceptance model has been a theory that is most widely used to explain an individual's acceptance of an information system. This study has reviewed numerous literatures available in this area.
Diniz, E.H., Porto de Albuquerque, J., & Cerney, A. K. (2011). Mobile Money and Payment: a literature based on academic and practitioner-oriented publications (2001-2011). *Proceedings of SIG GlobDev Fourth Annual Workshop, Shanghai, China December 03, 2011*	This work is based on literature review as both academic, peer-reviewed articles and the available non-peer-reviewed practitioner-oriented publications have been carried out.	Total of 196 papers out of which 94 peer-reviewed and 92 non-peer-reviewed – published in the period 2001-2011) in the global form papers has been taken to gather the information.	This paper seeks to help to fill the knowledge gap by providing a comprehensive literature review, which attempts to analyse significant experiences in mobile money and payments field, especially in developing countries. This literature work depends upon interaction between different actors, factors encouraged their adoption, effect on local flow of money, legal and regulatory environment and their role authorities related issues of gender behaviour.	It has been observed this paper has extensively analysed academic and non-academic papers related to the important topic of mobile money and payment system.

- Shendge, M. P. A., Shelar, B. G., &Kapase, A. P. S. S. (2017) in their study examined the impact of Cashless Transaction in India basically, this study is restricted to secondary data as India is gradually transitioning from a cash-centric to cashless economy as it has been seen from the RBI reports that e-wallets has formed an huge impact towards cashless transaction in India on this basis; it has finds that E-wallet payment method is more preferred by customers than any other payment methods. [1]
- Mathangi R, Latasri O.T.V and Isaiah Onsarigo Miencha (2017) highlights the service quality improvement through digital banking mainly, described the new era of India where lot of resources and efforts are put for a smooth transition towards the digital payment. This can be done by reducing the issue and challenges and by providing a secure and save digital banking system towards the society. [2]

- Manikandan DR.S, and Jayakodi. J.Mary. (2017) examines the empirical study on consumer adoption of mobile wallet with special reference to Chennai city as this paper mainly focuses on the usage of mobile wallets as many new technological advancement has affected the consumer's decisions to adopt mobile wallets the study highlights them all. Basically, mobile wallet usage awareness is spread among the people in India due to government policy of demonetization and this as forcefully induced the usage of mobile wallet besides this the security issues and risk factors are reduced and it will automatically increase the adoption of mobile wallet. [3]
- Brid Sagar, Agrahari Kajal, Chandra Mrs.Priya. (2017) the research mainly focuses on the study of various mobile banking applications which is used by different sectors of society as it described well the usage of mobile banking applications. The results display maximum users of Paytm in comparison to Freecharge. Hence it can be observed that digital wallets and mobile banking is the future. [4]
- Sharma B., Vermani Dr.S. (2017) analyse the e-wallet and its future in India as there are various factors that can affect a consumer's decision to adopt digital wallet as a mode of online payment. Apart from this, the study also attempt to find out the various risks and challenges faced by users of digital wallet. [5]
- Bhatnagar Dr. Harshita. (2017) concludes that demonetization should be welcomed as a revitalizing and positive step toward massive digital transformation of the country. As demonetization is like greasing the wheels of the economy and transforming India into Digital India by providing various laws and strategy towards the economy.[6]
- P. Kalyani (2016) through the empirical study on awareness of Paperless E-currency transaction concludes that modern financial system has gone through many changes in terms of payment processing system from traditional banking system to modern banking system as it has seems that both the banking youth ingoing to prefer e-wallet for their further transaction because of ease of use and better encrypted reliability of secure and fast transaction facilities.[7]
- Bezovski Z. (2016) concluded that the development of internet and the arrival of e-commerce in the payment process by providing verity of payment option towards the society. As this paper, has considered all the factors and the modes of mobile payment for a promising future of mobile payment systems which have to be better integrated with present telecommunication and financial infrastructures.[8]

- Rathore, H. S. (2016) examines on the adoption of digital mobile wallets. It depicts that the consumer can nowadays use their smart phones to make money transaction or payment by using applications installed in their phone more conveniently.[9]
- Sardar Dr.Ramesh. (2016) the present study has focus on preference towards mobile wallets among the urban population of Jalgaon city and effectively analyzed the impact of demographic variables on the usage of Mobile wallets whereas 90% of the respondents believe that an instant payment is an important factor to opt for Mobile payments out of which 29% respondents preferred to use mobile wallet for transferring the money. Basically, it demonstrates that the electronic payment system has been a boon for consumers as most of the urban population of Jalgaon city are prefer the mobile wallets for their necessary payments. [10]
- D Amutha. (2016) depicts that in this study, it is useful in understanding the consumer awareness of e-banking system and what types of risk involved in e-banking system. On the other hand major respondents are likely to operate through e-banking for their transaction. [11]
- Sharma Nisha and Kaur Rupinder deep. (2016) as per this paper has extensively analysis the M-services in India under which the awareness towards technology will show positive results for the new innovations in mobile banking and their application towards users in India. As mobile banking websites are more preferable rather than traditional banking method by the customers in today's environment.[12]
- Lumb Richard, Macchi Mauro and Moreno Pedro Juan. (2016) conducted a study and made an important contribution by bridging the technology gap in financial services boardroom as digitalization is not only means new banking channels as it is also offers unique opportunities for banking sector to drive growth and profitability. [13]
- Skan, J., Dickerson, J., & Gagliardi, L. (2016) in their report analyses the global financing activity from venture capital, government funds, and on banking technologies whereas different facts and figures are used to analyse the various upcoming growth towards the economy. In this term, the new form of payment mode has been established by various industries which names as GAFAA (Google, Apple, Facebook, Amazon, Alibaba) which has made an evolution towards the new mobile payment system in the world.[14]
- Painuly Dr. Poonam, Rathi Shalu. (2016) analysis that the concept of mobile wallet and its upcoming mode of business transactions. On the basis of secondary data, all the

relevant information related to mobile wallets as it has described all the types, their importance as well as their relevance towards the society use. [15]

- Batra R. and Kalra N. (2016) this study makes a valuable contribution to research in the area of financial technology, by exploring digital payment systems in India. It aims to examine the adoption patterns of digital wallets by the respondents, the results indicate that there exists a huge untapped market for digital wallets both in terms of increasing awareness as well as its usage. [16]
- Dennehy, D., & Sammon, D. (2015) explains the different trends in mobile payments with the help of literature review. It mainly focuses on theoretical and empirical papers were Legal, Regulatory & Standardisation, Technology, Security & Architecture, Social, Cultural & Economic, and Multiple Categories. The study states that there influential factors that shape the Trends in mobile payment services leads be a key driver for the adoption for future payment system. [17]
- Yousefi, N., & Nasiripour, A. (2015) the result of this paper has revealed that the effect of e-commerce has been increased their size of dependence among the customers by achieving their trust level by providing an innovations towards them either it has been described that there is no relation between customers trust and demographic variable but the effect of e-banking services shows the incredible increase in customers trust just because of quality services.[18]
- DV shreE V, N Yamuna,G Shree N.(2015) studied on new dynamics in new digital payment systems and there problems with special reference to Pay tm and Pay U Money with all the perceptive ways towards customers payment system through easy online payments, solving customers problems while making payments, upgraded security safeguard, easy return money, cashback facility, less documentation, automatic refunds, transfer of money and many more. People basically using these application in higher percentage because Pay tm and Pay u Money is giving 2 level security authentications to safeguard their payment details, both these are providing easy payment structures compared to Digital payment system[19]
- Bhatnagar Dr. Harshita. (2015) depict the level of the customer's awareness as well as adoption of banking services by the rural customers since this paper's preliminary findings is based on investigation of the level of the customer's awareness as well as adoption of banking services by the rural customers based on demographics, bank type, and familiarity with Computer/internet facilities provided by banking sector.[20]

- Shet, A. R. (2015) examines on different technology innovations in Indian banking sector which have contributed to development of Indian banking system with references towards facts and figures which would helps in analysing the economy growth. Basically, t has improved manifolds in terms of Technology, Deregulation, Product & Services, and Information Systems. Banks have to adopt a holistic approach to fulfil the ever changing needs of customers and to grab a better market share.[21]
- Dauda, S. Y., & Lee, J. (2015) aims to construct the understand of banking customer's behaviour and future online services on the basis of conjoint analysis to know the different aspects of consumer behaviour towards technology adoption. Firstly it focused on consumer's preferences on future online services after that it leads to acceptance and adoption of future online services and lastly the impact on consumer's perception to adopt the future online services, the study addresses the conjoint analysis of various factors towards online banking services.[22]
- Daneshgadeha S., Yıldırıma Ö. S. (2014) made the empirical investigation of internet banking usage and concludes that customers prefer to use internet banking, because they perceive it as useful and easy to use. Furthermore, compatibility of internet banking with customers' life and work styles is found to be the crucial driver of internet banking usage where as personalized and alliance services are determined as the additional factors which encourage customers to use internet banking as well.[23]
- Neeharika P & V. N. Sastry (2014) conducted a study and made an important contribution towards the development of a mobile wallet that can work across various platforms. As security is the major concern when it comes to finance related information, the study addresses the security issues by giving access control model that works towards interoperable mobile wallet.[24]
- Malik, S. (2014) concludes that banks have to adopt a holistic approach towards technological innovations for the growth of banking sector. Primary factors of growth are mobility and customer convenience and banks are continuously exploring new technology, with terms such as mobile solutions and cloud computing is being used with greater regularity.[25]
- Kumar, B. (2013) in this paper author have describes different trends have been described which has direct impact on online payment industry it includes: shifting consumer preference towards debit card usage, growing social networking, application and online game, technological innovation, e-banking transaction, online shopping roles etc will leads towards new era of payment system.[26]

- Sikdar P., Makkad M. (2013) conducted a study on internet banking in India with perspective on their benefits and challenges introduces to internet banking in addition to the bank's customers as well the banking organization as commercial banking operations are mainly focused on direct selling and other activities like adoption of technology but this study remained limited to major Indian metropolitan cities and tier-I cities, given the fact internet banking has not yet reached the sizeable portion comprising of rural areas of country. The major reasons behind this trend have been lack of effective internet penetration and adequate banking infrastructure in these areas.[27]
- Witeepanich, C., Emklang, N., Matsmak, J., Kanokviriyasanti, P., & Chanvarasuth, P. (2013) surveyed 500 customers of Bangkok metropolitan area to find out the factors influencing mobile adoption services. In order to reach to findings the researchers have applied five factor analysis to led mobile backing adoption in Thailand are Social influence, Trust, Facilitating conditions, User Perception, and User Demographic which shows that the most important factors influencing mobile banking adoption is trust.[28]
- Bamoriya, D., & Singh, P. (2013) in this paper titled "mobile banking in India: barriers in adoption and preferences" mentioned that, mobile banking is considered as new era of banking sector but still due to some security reasons these services have not been used by customers hence they are avoiding mobile banking hence they are avoiding mobile banking and the major problem of mobile banking is its non-adoption by the customers. [29]
- Ashok, A., Gajera, S., Chakraborty, J., Arolker, P., & Rai, N. (2012), through a study on SMS based payment system described an efficient alternative to the traditional and current payment systems as Security ,Convenience, Time, Verification process, Bank account, Ease of Use, Requirement for payee are some of the parameters which will be consider towards technology adoption. M-wallet is an innovation as it is faster, safer and network independent technique for the customer use.[30]
- Safeena, R., Date, H., Kammani, A., & Hundewale, N. (2012) worked on various factors behind technology adoption and Indian consumers which related to the study of mobile banking. Specifically, these factors are perceived usefulness, perceived ease of use, consumer awareness and perceived risk on the acceptance of mobile banking by the consumers. As this paper has been consider any new forms towards mobile banking have been offered by retail banks towards the society but still adoption has been dependent on consumer's perception and attitude. As far as customers are concerned they feel high percentage of risk in adoption.[31]

- Bahl Dr. S. (2012) highlighted the overall "E-banking: challenges and policy implications" which shows the new wave of the future. This paper aims to describe the challenges of E-banking and further provides efforts towards policy implications to make E-banking more effective for customers and for society. The national regulators have modified their regulations to achieve their main objectives like ensuring the safety and soundness of the domestic banking system, promoting market discipline, protecting customer rights and the public trust in the banking.[32]
- Sharma, N. (2012) investigated an empirical study of rural customer's satisfaction from e-banging in India in this the study attempts to evaluate the perception of rural customers which has not been yet studied as all the work has been conducted in the field of urban population. The present swot is to analysis the rural customers from e-banking in India. Undoubtedly e-banking has a strong catalyst for the economic development but still it has been seen its propensity has been lacking in the rural sector. [33]
- Plewa C. and Troshani I., Francis A., Rampersad G. (2012) in their study examined the technology adoption and performance impact in innovation. The paper contributes to literature by isolating determinants like Perceived usefulness, Attitude towards Technology ,Perceived ease of use, Compatibility, Need for interaction, Intention to use, Innovation process performance that affect on adoption of Information Management Applications (IMAs). It also contributes to extant literature by providing a model that can explain IMA.[34]
- Surendran P. (2012) examines the Technology Acceptance Model (TAM). Basically, the article has explained the different crucial factors which will show their relevance in adoption process towards consumer. The study also reviewed the application areas where technology acceptance model can be implemented. [35]
- Diniz, E.H., Porto de Albuquerque, J., & Cernev, A. K. (2011) this paper seeks to help to fill the knowledge gap by providing a comprehensive literature review, which attempts to analyse significant experiences in mobile money and payments field, especially in developing countries. This literature work depends upon interaction between different actors, factors encouraged their adoption, effect on local flow of money, legal and regulatory environment and their role authorities related issues of gender behaviour. [36]

Research Gap

On the basis of the review of researches and studies it can be conducted that not much work has been done on the concept of M-Wallets. There is less literature available on the perception of the consumer towards the mobile wallet and payment methods. Most of the research work has been done by countries other than India. The published research papers reviewed also suggest that no work has been done on the adoption of mobile wallet services, awareness and their effect about M-wallets in India. There is no literature available on the study mobile wallets through any adoption model or theory.

Scope of the Research

This study will give an insight about mobile wallets payment gateway services in the current economic environment on account of the growing need of mobile payment transactions. The study will focus on the awareness of mobile wallets and its use and will throw light on the consumer adoption with regard to the mobile wallets using technology acceptance model. It will also seek to know the problems faced by the consumer in the adoption of mobile wallets. Finally, the study provides will suggestions in order to improve the efficiency of the mobile wallets.

Justification and Relevance of the Study

The study will help to understand, the consumer intention over the adoption of mobile wallet usage.

Relevance to Mobile Wallet Companies:

- ✶ It will help in improving financial services associated with mobile wallets.
- ✶ It will be of assistance to deal with challenges in the market
- ✶ It will improve research and development services related to Mobile Wallets adoption.
- ✶ It would help out in understanding the customer's needs.
- ✶ This study would help them built policies to retain their customers in future aspects.
- ✶ It would help to build different strategies, policy related to financial technology.

Relevance to Consumer:

- ✶ The study will help to understand changing perception of consumer's daily needs and wants.
- ✶ This study would help to appreciate consumer's preferences towards adoption of mobile wallet.
- ✶ Awareness towards mobile wallets and financial technology will increase.

- ✶ It would help out finding the gap between the actual services provider and expected services.

Relevance to Economy:

- ✶ It will help to explore strategies to uplift economic development through digitalization.
- ✶ Able to deal with the environmental challenges in future.
- ✶ Easy way to track spending with the help of KYC norms and government policies.
- ✶ The study would aid in finding out opportunities related to financial services.
- ✶ Helpful in effective and efficient utilization of technology for providing financial services.

Relevance to Academics, Students & Others:

- ✶ Increase the knowledge and provide conceptual framework related to mobile wallet adoption.
- ✶ The study will provide a path to study adoption of other financial technology services.
- ✶ It will provide a push to the financial inclusion in the country through further studies in financial technology.
- ✶ This study provides a path for future research work.

Research Objective

The prime goal of this research is to investigate the adoption perception of consumers using mobile wallets and identifying the critical factors influencing the decision-making process towards consumers in relation to mobile wallets.

1. To study the impact of external variables on consumer's belief's, attitude and intentions towards adoption of mobile wallet services.
2. To determine effect of perceived ease of use (PEOU) on perceived usefulness (PU) and attitude towards adoption of mobile wallet services.
3. To study the effect of perceived usefulness (PU) on attitude and behavioral intension towards the adoption of mobile wallet services.
4. To study the effect of attitude towards adoption of mobile wallet services on behavioral intension to use.
5. To study the effect of behavioral intension towards mobile wallet services on adoption of mobile wallet services.
6. To generate a theoretical depiction of mobile wallet adoption based on Technology Acceptance Model (TAM).

7. To check the deviation in Technology Acceptance Model (TAM) and generate a theoretical model for adoption of mobile wallets.
8. To study the security and safety issues related to the adoption of mobile wallets.

Hypothesis

The aim of the current study is to adapt the Technology Acceptance Model (TAM) to the use of Mobile Wallet Services. The literature, which are related to the factors included in this study m1odel are listed below:

$H_{0(1)}$: External Factors have no significant association with perceived ease of use and perceived usefulness.

$H_{0(2)}$: Perceived Ease of use (PEOU) has no significant association with perceived usefulness and attitude towards adoption of mobile wallet services.

$H_{0(3)}$: Perceived Usefulness (PU) has no significant association with attitude and behavioral intention towards adoption of mobile wallet services.

$H_{0(4)}$: Attitude has no significant association with behavioral intention to use towards adoption of mobile wallet services.

$H_{0(5)}$: Behavioral intention towards mobile wallet services has no significant association with adoption of mobile wallet services.

$H_{0(6)}$: There is no significant relationship between the constructs of the research model, technology acceptance model and the adoption of mobile wallet services.

RESEARCH METHODOLOGY

Research Design:

This research will accomplish essentially through qualitative approach that is based on descriptive study method and exploratory study method to assess the adoption of mobile wallet services. Descriptive study refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and researching certain conclusions either in the form of solutions towards the concerned problem or in certain generalizations for some theoretical formulation. It is also exploratory study

which is the basic type of research and one of a preliminary research kind, which was used by experts in the study. Here the researchers evaluates the data and verify options of acquiring maximum relationship among the variables without having any applications. It is basically getting familiarity with a phenomenon or to achieve new insights into, studies with object are termed as exploratory research.

Sampling

- **Universe**- The first step involved in developing sample design is to clearly define the number of cases, technically known as the Universe. A universe may be finite or infinite in nature. The universe of this study is infinite in nature.
- **Sample Unit**- In the present research study, the sample unit is Jaipur.
- **Sample Method-** The sampling used for drawing sample for this study is Convenience Sampling Method. Convenience Sampling is a non-probability sampling technique where subject are selected according to the purpose of the study.
- **Sample Size** – The sample size refers to the number of data to be gathered for research study, from the given population. The sample size for the present study will be derived as follows:

Cochran's formula for calculating sample size when the population is Infinite:

As per Cochran (1977), the sample size would be 666.

Where:

- Confidence Level – 99%
- Margin of Error – 5.0%
- Jaipur Population – 3,653,927 (3.6 million)
- Sample Size – 666

The formula used for these calculations is:

$$n_0 = \frac{z^2 pq}{e^2}$$

Where, n_0 is the sample size, z is the selected critical value of desired confidence level, p is the estimated proportion of an attribute that is present in the population, q = 1− p and e is the desired level of precision.

Taking 99% confidence level with ±5% precision, the calculation for required sample size will be as follows--

p = 0.5 and hence q =1-0.5 = 0.5; e = 0.05; z =2.58

$$\text{So, } n_0 = \frac{(2.58)^2 (0.5)(0.5)}{(0.05)^2} = 665.64 = 666$$

Following table shows sample sizes for different confidence level and precision.

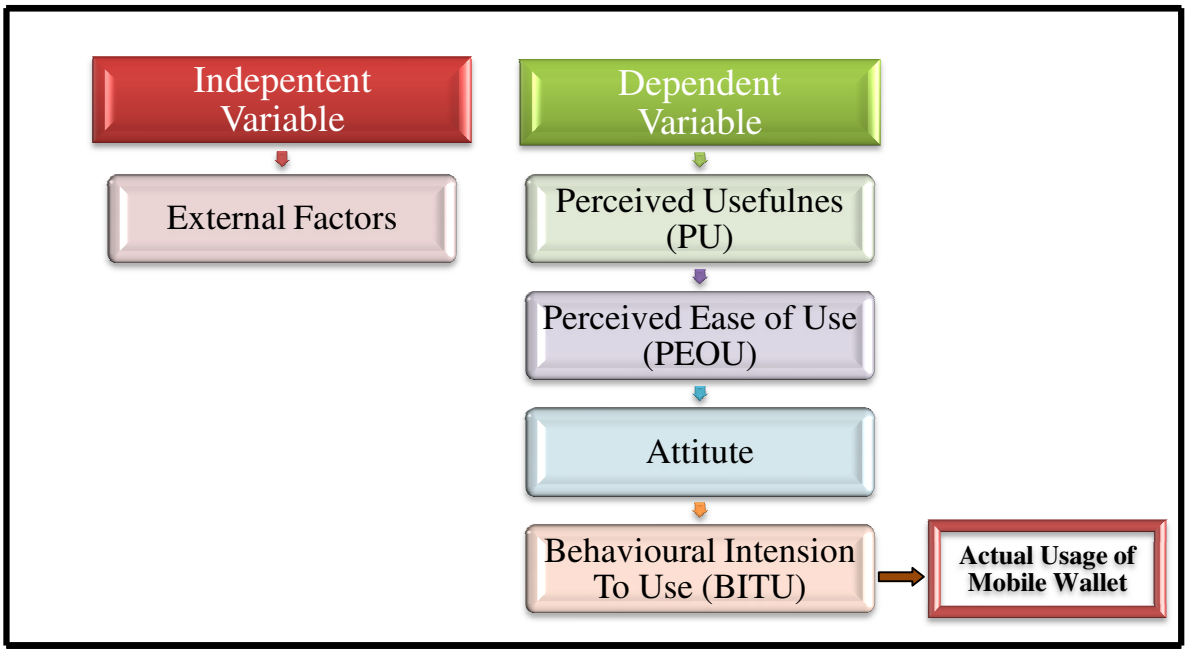
Table: 6
Sample size calculated for different confidence level and precision

Confidence level	Sample size (n0)		
	e =.03	*e* =.05	*e* = .1
95%	1067	384	96
99%	1849	666	166

Source: Cochran (1977) Table

- **Variables Identified**

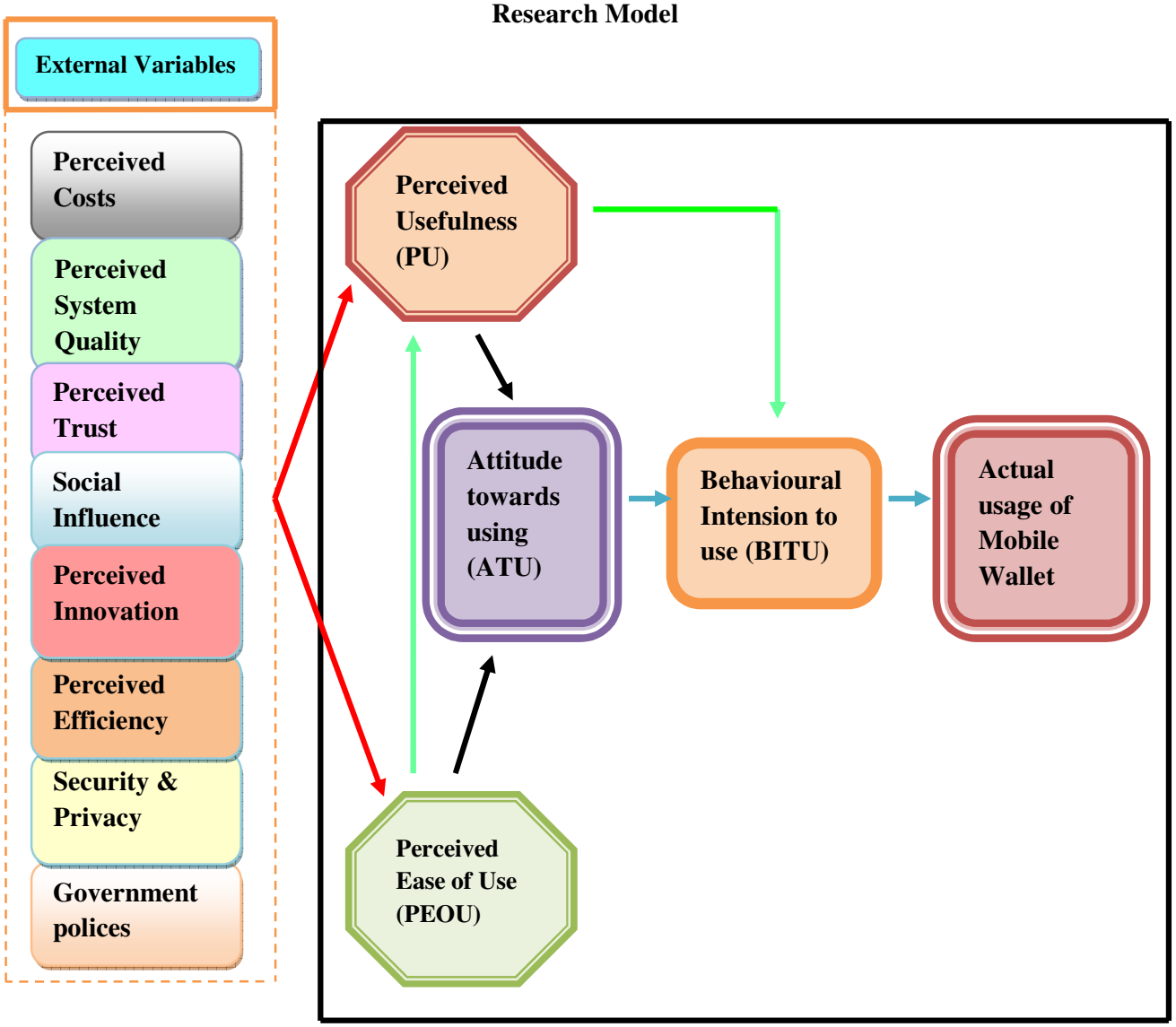
Figure: 7
Types of Variables



Research Model

This study have adopted a specific Technology Acceptance Theory and employed a research model through various review available on mobile wallets and on Technology Acceptance Model (TAM). This model investigates the relationship among independent variables towards the dependent variables which will further demonstrate the mobile wallet adoption usage. An external variable has been courted from review of literature.

Figure: 8
Research Model



Data Collection Tools

- Primary data will be collected by conducting survey through questionnaire. The questionnaire will consist of two parts. The first part will be used to draw the information about the demographic profile of the customers. The second part will include the items related to the independent variables identified.
- Secondary information is available in the published form, which includes data from textbook, journals, management reports, seminar papers etc. The electronic data and results of survey conducted by organization are also important data sources for the report.

To gather all the information required for the research would be accessed from reference books, business magazines and journals & Web sources.

DATA ANALYSIS AND INTERPRETATION:

Statistical Tools:

Reliability: The reliability of the questionnaire will be checked through Cronbach's Alpha as a reliability coefficient of (Cronbach's Alpha) 70% is considered as ''acceptable'' in most of the research study.

Descriptive Statistics: The statistical tools like arithmetic mean, standard deviation, co-efficient of variation, etc will be used to analysis the data. Moreover, data will be presented in a diagrammatic form using histogram, bars or pie charts etc.

Inferential Statistics: To examine the actual data with the expected results and to test the different hypothesis made in the present study, different test will be used as follows:

- Ranking Correlation technique
- Chi-square test
- Two way analysis of variance (ANOVA)
- Correlation and Regression Analysis
- Z test

FACILITIES AVAILABLE

Facilities Available

- Books
- Library
- Internet
- Journals
- Research studies

Limitations of the Study

- Consumer's perception changes from time to time with the advancement in the technology.
- The limitations of the convenience sampling technique will be applicable to this study.
- Bias of the respondent may affect the result of the study.
- Secondary data will be used to support the study.
- Geographical area is limited to the Jaipur region only.

CHAPTERISATION

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1.4 Services Provided by Mobile Wallets

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1.6 Technology Adoption

1.7 Theories of Technology Adoption

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Chapter 4: Analysis and Interpretation of Data

Chapter 5: Conclusions, Findings and Suggestions

5.1 Conclusions

5.2 Findings

5.3 Suggestions

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